

FINISHING INFORMATION

D&T: CYNHYRCHION GRAFFIG

This is the list of processes a print finishing company can be expected to carry out.

Standard folds.

Scoring, *perforating.*

Book making *and trimming.*

UV varnishing.

Machine coating.

Laminating.

Drilling.

Blocking.

Embossing.

Round cornering.

Die cutting.

Die stamping and Embossing.

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At GCSE it is not a requirement to have a working knowledge of all these processes, but candidates should be:-

- i) aware of them

- ii) know what the outcomes of the processes are

- iii) know how to mock up the most important outcomes in school.

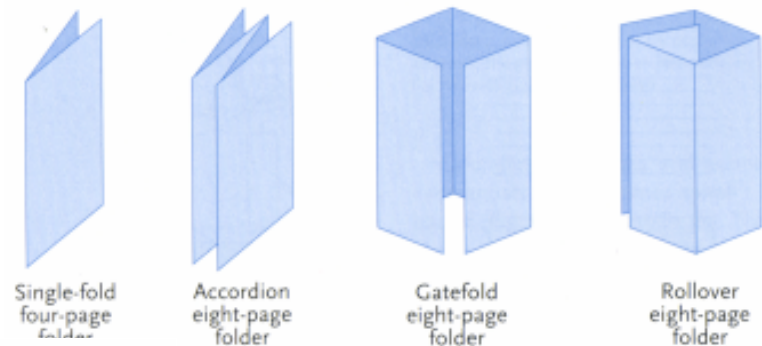
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FOLDING

It is good practice to score the paper or card before folding. This helps the quality of the product by reducing the chances of the ink layer cracking on the fold as it reduces fibre breakage on the fold.

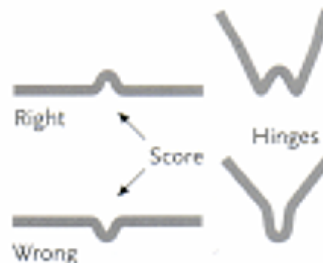
Press scoring is common and done on a letterpress machine using a rule to indent the paper. Scoring rules can also be included into a die cutting press.

There is plenty of data on the standard folds that are available. They are often included with Software as templates.



SCORE BEFORE FOLDING

Heavy paper or card should always be scored before folding — enough to produce a raised ridge. A fold should always be made with the ridge or hinge on the inside. Booklet covers must have a score wide enough to accommodate all the pages to be inserted inside.



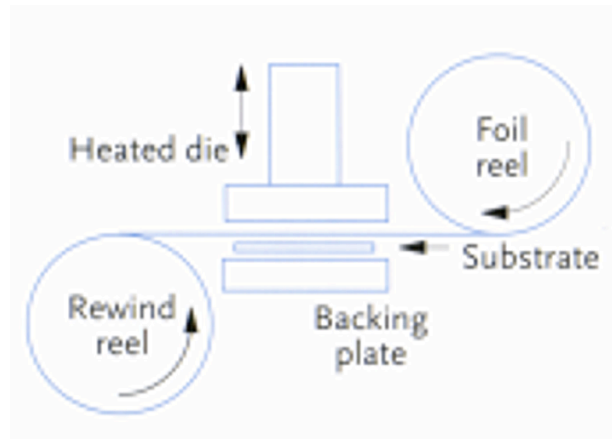
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BLOCKING

This is also known as hot foil blocking or leaf stamping.

The heated metal die is pressed onto gold or silver leaf, foil on a plastic carrier or a hologram.

The die embosses the design into the material and the heat transfers the foil to the material.



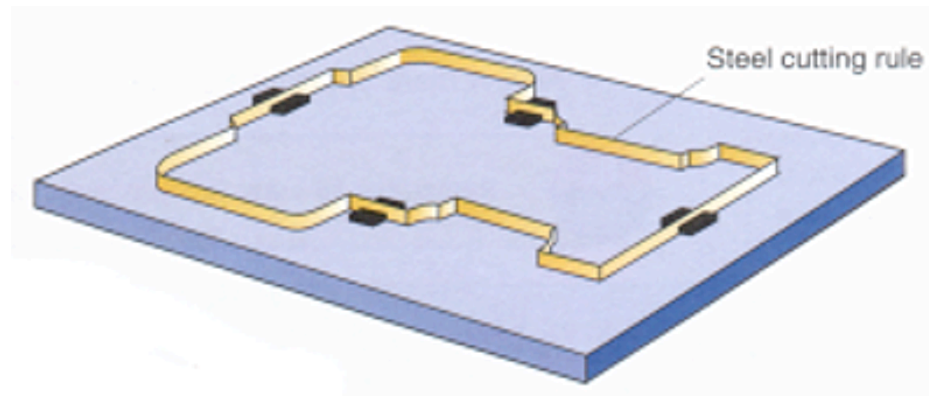
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DIE CUTTING

This process uses steel rules to cut functional or aesthetic shapes in paper and card.

The DIE is usually a wood block with steel knives inserted into the block.

The block is pressed into the card and cuts against a hard rubber block.



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DIE STAMPING

This process produces a low relief effect on paper or card.

A hollowed out recess is produced (the die) and the stamping part (the counter die) pushes the material into recess.

The die is either chemically etched or CAM cut.

Embossing is a similar process but used to texture paper or board. Rollers are used to apply the pressure to push the material into a textured roller.

The textured rollers are usually made from papier-mâché.

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LAMINATING

This is not the same as **ENCAPSULATION**.

A thin (5 to 20 microns) plastic layer is glued to the printed material under a heated roller. Two days must be allowed for drying before further work is carried out. UV lamination cures more quickly.

The plastics used are:-

**Orientated Polypropylene
(OPP)**

- maps, brochures, catalogues, book covers, cards, POS displays, carrier bags

Polyester

- When heat resistance is needed e.g. table mats.

Nylon

- Where scuff resistance is needed e.g. workshop manuals.

Acetate

- Where gluing and blocking is needed e.g. cartons

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LAMINATING

All the laminating materials allow for folding and embossing.

It is possible to laminate both sides of printed material.

This process provides products with :-

- i) Improved physical strength.
- ii) Improved visual qualities - gloss, matt, textured.
- iii) Water proofing.
- iv) Heat resistance.
- v) Resistance to finger marking - e.g. matt black book covers.

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VARNISHING

This is the most common finishing process used for printed material. The varnish that is used dries in the air or on exposure to Ultra Violet light. There are two main applications - Rollercoat and Spot.

ROLLERCOAT UV VARNISH.

Also known as **Book Varnish**, **Machine Varnish** or **Lacquer**.

Applied by rollers, sometimes on the printing press.

This produces a barely discernable sheen but gives a scuff resistance.

Two coats can be applied wet on wet to give better gloss.

Textured rollers can be used to enable grained finishes.

Can be applied over lamination for extra protection.

The varnish can contain a high level of silicone to aid the slipperiness that is useful when assembling products.

NOTE: High Gloss or Liquid Laminating needs special machines.

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VARNISHING

SPOT UV VARNISH.

This is usually a high gloss varnish and is applied to a specific area of the printed material.

It enhances the impact of the product and is part of the graphic design.

Screen printing is often used for this process.

Spot varnishing is more expensive than Rollercoat because of the additional work needed. However it can create exciting contrasts between gloss and matt areas.

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BOOK MAKING

The Bindery is where this process takes place.

The printed material is put together so that the pages are in the correct order and fixed together with and inside the cover.

First the printed material is folded in a *folder*.

The process of stapling is known as *stitching*. A stitcher machine takes the folded *signatures* and *collates* them together.

They are then fixed together with staples or glue.

The book is now cropped to size.

A large stitcher machine can process 9000 books per hour.

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Some common methods of binding are:-

WIRE STITCHING - stapling, used for booklets, brochures and magazines.

PERFECT BINDING - the gutter fold is cut off and then the pages and the cover are glued together, used for paperbacks.

SLOT BINDING - like perfect but glue is forced into slots in the gutter fold. Stronger than perfect but cheaper than sewing.

SEWN BINDING - Gatherings of pages are sewn together and then gatherings are sewn together then the cover is glued on. Used for good quality paperbacks and limp bindings.

SPIRAL WIRE BINDING - pages are punched with holes and a wire spiral inserted using a special machine. Used for short run reports and manuals